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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,541	08/29/2001	Takaya Sato	0171-0778P-SP	4738
2292	7590	09/26/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER

1746

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

*[Handwritten mark]*

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/940,541	SATO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jonathan S. Crepeau	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 23 May 2005.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-8 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-8 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some
  - \* c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*[Handwritten mark]*

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 1-8. Claims remain rejected under 35 USC 103 for the reasons of record. Accordingly, this action is made final.

### ***Claim Rejections - 35 USC § 103***

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-208708 in view of JP 2000-173564.

Regarding claims 1 and 3, JP 10-208708 is directed to a lithium battery comprising a cell structure group formed by folding an integral body of the unit cell (see Fig. 1). The unit cell comprises electrode material layers laminated through a separator (5) (see Fig. 1). The cell further comprises an electrolyte (see paragraph 17 of the machine translation). Regarding claims 2, 3, 4, and 5, the outer periphery of the cell structure is covered with an ion impermeable and extensible high polymer sheet (65) (see abstract; Figures 1 and 2). The high polymer sheet has a tensile elongation percentage of 500-1000%, which is anticipatory of the range recited in claims 2, 4, and 8. Regarding claims 6 and 7, the polymer may be polypropylene (see paragraph 17). Regarding claims 1 and 3, the battery comprises a battery container (foil 61), which is covered with a PET layer (62) on the outer surface thereof. Regarding the recitation in claims 1 and 3 that the electrolyte is poured in the battery container after the cell structure group is contained

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therein, this is a process limitation that does not further limit the structure of the claimed product.

Accordingly, the limitation is given little patentable weight (MPEP §2113).

JP '708 does not expressly teach the battery container (61) is covered with an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1% or more, as recited in claims 1 and 3.

JP 2000-173564 is directed to a thin battery bag body comprising an inner layer and an elastic thin film outer layer (see abstract; Figure 1). The outer layer may comprise the same material as the inner layer, which includes fluorine-based elastomers such as PTFE and PVDF (see paragraph 16 of the machine translation).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of JP '564 to use a highly elastic thin film as the outer layer of the bag of JP '708. In the abstract, JP '564 teaches that "the outer rubber layer 6 is provided on the whole face of the surface of the bag body 1 so that the impact absorbing property can be drastically increased while holding the flexibility of the bag body 1." This disclosure would motivate the artisan to use the elastic rubber outer layer of JP '564 as the outer layer of JP '708. Although JP '564 does not appear to teach the exact tensile elongation value of the elastic outer layer, the artisan would be motivated to use a value within the range disclosed by JP '708 (i.e., 500-1000%) because the tensile elongation percentage is a measure of the elasticity of a material. Accordingly, the instantly claimed subject matter would be rendered obvious to the skilled artisan.

*Response to Arguments*

3. Applicant's arguments filed May 23, 2005 have been fully considered but they are not persuasive. Applicants state that "JP '708 and JP '564 disclose batteries having a container made of laminated film, the laminated film being made up of metal foil and high polymer sheets with a TEP of at least 1%. [...] In contrast, the present invention covers the battery container with a separate high polymer sheet." In response, it is first noted that the instant claims no longer recite a "separate" high polymer sheet. Further, Applicants appear to be traversing the Examiner's characterization of the metal foil (61) of JP '708 as being the battery "container" recited in the claims. However, it is noted that in the instant specification, Applicants expressly consider such metal foils as battery containers. As disclosed in paragraph [0037] of the instant specification:

The battery container 6 is formed of a packaging material, examples of which preferably include a foil of a metal such as aluminum or stainless steel, and a laminated high polymer film having a sufficient strength.

Thus, there appears to be no difference between the containers contemplated in the specification and the materials disclosed in the JP '708 and JP '564 references. Applicant further argues in the present response that "[m]ore specifically, in the case of JP '708 and JP '564, the high polymer sheet and the battery container are united to one another by lamination. The high polymer sheet therefore cannot stretch elastically, so that it cannot be deformed between the two electrodes through the container. Manifestly, the batteries of JP '708 and JP '564 cannot achieve this beneficial effect provided by the present invention." However, the instant specification, at paragraph [0039], expressly contemplates lamination, as follows:

According to the present invention, to improve the tensile elongation percentage of the laminated high polymer film as the packaging material for forming the battery container 6, at least one of

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multiple layers of the laminated high polymer film may be made from the extensible high polymer sheet of the present invention.

Therefore, Applicant's assertion that the combination of JP '708 and JP '564 cannot achieve the benefits of the present invention is not seen to have merit. As such, the invention as a whole is still believed to be rendered obvious by JP '708 and JP '564, and the rejection over these references is maintained herein.

### *Conclusion*

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
September 20, 2005